UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

JUNE 1969

PART II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

CONTENTS

	Page
Albacore Show Early--But Off Cape Mendocino	1
Bluefin Fishery Early--But Off to Hit-and-Miss Pace	4
Sea Surface Temperature Charts, Eastern Pacific Ocean, June 1969	5

U. S. Department of the Interior
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P. O. Box 271
La Jolla, California 92037

*Part 1 - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, U. S. Custom House, Terminal Island, California

ALBACORE SHOW EARLY--BUT OFF CAPE MENDOCINO

By the close of the July Fourth holiday weekend, U.S. West Coast waters have been subjected to the most comprehensive pre-season albacore tuna scouting in recent years.

Two anchovy-sardine survey cruises were extended to permit BCF R/V DAVID STARR JORDAN to troll for albacore during late May and early June. JORDAN surveyed nearshore waters from Punta Eugenia, Baja California, Mexico northward to Point Conception, and reported no albacore catches despite favorable sea temperature conditions northwest of Guadalupe Island in mid-June. The fishing vessel TYPHOON, operating on joint cooperative pre-season scouting arrangement between the Fishery-Oceanography Center and Oregon State University, departed Newport, Oregon, on June 15. TYPHOON headed west-southwest toward the district formerly occupied by U.S. Navy radar picket vessels stationed approximately 400 miles west of Cape Mendocino. In the 1960-64 interval, picket vessels reported early season catches from this area as early as June 10. From June 20 to 30, TYPHOON took 37 fish in an area bounded by longitudes 129° and 135° W and latitudes 41° and 37° N. TYPHOON's albacore were the first authenticated catches of the 1969 season, and remained so until the last week of June.

During the last week of June, one San Diego sportfishing partyboat commenced probing the area 100-135 miles west-southwest of San Diego and took one 24-pound albacore on June 29. In the north, Oregon State University's R/V CAYUSE and the Fish Commission of Oregon's chartered fishing vessel SUNRISE commenced scouting the district from the Columbia River mouth westward about 165 miles and south to the Oregon-California border at 42° N. These vessels and three or four commercial fishing vessels moving south in preparation for the albacore season located small numbers of tuna 55 miles southwest of Cape Blanco and 115 miles west of Brookings, Oregon, on July 2.

Oregon State University's R/V YAQUINA, operating in the Columbia River plume region from June 18 to July 3, reported a shallow upper warm layer which was only 30 feet deep 120 miles west of Astoria. YAQUINA's data indicate that the summer heating has not yet added sufficient warmth to the upper mixed layer in this district to attract large numbers of albacore.

The Pacific Coast has experienced unusual late spring and early summer weather. Prior to June 24, a persistent upper air trough and cold-core eddy caused the eastern side of the Eastern North Pacific High to have weaker than

normal pressures and gradient winds. Consequently, the usual intensification of the High in May failed to occur, and the northwesterly winds were weaker than normal. Upwelling was sharply diminished, and inshore sea temperatures were higher than normal along the entire U.S. West Coast.

During the June 24-26 interval the prevailing weather pattern shifted sufficiently to permit the Eastern North Pacific High to intensify, and strong northwesterly winds caused the rapid summer heating of the upper layer of the sea off Oregon and Washington to be checked temporarily. The first major surge of upwelling of the year was observed off Central California during this interval. Then the weather returned to the previous general condition, and remained so until July 3, when the High intensified again. Strong northwesterly winds presently dominate the weather scene off Northern and Central California.

At the dockside, several events have occurred which appear to be establishing the pattern of early-season albacore fishing activity. The Pacific Northwest salmon troll fishery has been relatively poor. Diminished upwelling has created a narrow zone of cold water nearshore from Point Conception northward. In Oregon, the zone is reported to be only 5 miles wide off Coos Bay and Newport, according to Oregon State University and NASA sources. As a consequence, many trollers in that area have re-rigged for albacore and are now putting to sea.

The dockside fishermen-canners price negotiations were successfully concluded on June 30. Commercial albacore prices range from $450 per ton for fish delivered to Astoria, San Pedro and San Diego canneries to a minimum of $400 per ton for fish delivered to the Eureka, Fort Bragg and San Francisco ports. These fish have to be trucked long distances to the canneries, and consequently have relatively large transportation fees which must be subtracted from the basic price.

Little commercial scouting activity has taken place prior to the July Fourth weekend. The relatively poor pre-season indications for Southern California waters have tended to discourage widespread searching activity; Southern California fishermen have adopted a ". . . wait-and-see. . ." attitude. Meanwhile, in the north, vessels home-ported in Moss Landing and San Francisco were preparing to head westward to find albacore, while boats home-ported in Northern California and Southern Oregon appeared to be heading for the Coos Bay offshore district to find early-season fishing.

Unless a major concentration of albacore is located south of Point Conception within the next 2 weeks, July landings in California could establish yet another production minimum. In Southern California, conditions appear to

be gradually worsening. The region south of Sixty-Mile Bank appears less promising with time as the upper mixed layer gains heat rapidly. This rapid rise is associated with increased solar radiation and the lack of the usual downstream entrainment of cold upwelled water from Point Conception.

The Oregon fishery will start somewhat slower than last year, and may be up to 2 weeks behind events observed in 1968. More heat must be added to the upper mixed layer, and thermocline depths must increase to between 50 and 80 feet before significant concentrations of albacore will appear.

According to the numerical weather analog series maintained by the U.S. Navy Fleet Numerical Weather Central at Monterey, present synoptic weather patterns appear to be lagging about 1 week behind expected normal seasonal events. Oceanic conditions monitored by our Program staff also appear to reflect this 1-week lag interval. Thus, the 1969 albacore tuna fishing season must still await events transpiring during the first 2 weeks of July before seasonal trends begin to become evident.

R/V DAVID STARR JORDAN will survey the offshore district from San Diego north to San Francisco during the July 10-31 interval. JORDAN is continuing the California Cooperative Oceanic Fishery Investigations - Marine Life Research anchovy-sardine survey and will be working survey lines 93 through 60, ranging from a maximum of 440 miles offshore from San Diego and Los Angeles to from 160 to 240 miles offshore north of Point Conception to San Francisco. JORDAN will troll for albacore during daylight hours between stations on this survey.

Long-time readers will recall that in 1966, JORDAN's catches on the same survey track provided the first real evidence that the albacore were bypassing Southern California for northern waters (see July, 1966 issue of this publication). We expect that the 1969 survey should yield similar information; such data as are received each day from JORDAN will be relayed to the fishing community via the WWD broadcasts.

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader

July 9, 1969

BLUEFIN FISHERY EARLY--BUT OFF TO HIT-AND-MISS PACE

Despite one of the earliest opening dates on record, the Pacific Coast bluefin fishery has established a hit-and-miss pace.

Fishing first began on April 24 in the area southwest of Uncle Sam Bank, off Lower Baja California, Mexico. After the initial flurry, when some 300-400 tons were taken, windy weather interrupted the fishing until another quiet period on June 1 and 2, when another 500 tons were netted. Since then, bluefin catches have run from 100 to 350 tons per week, depending upon the length of time between windy periods on the fishing banks south of Punta Eugenia.

Local bluefin fishing has materialized only for the sportfishing community. Occasional catches have been reported since the first week of June by the sportfishers and the first purse seine catch of consequence, 15 tons of 30-40 pound fish, was recorded over the July Fourth weekend off San Clemente Island.

Total bluefin catch estimated for the season to date is about 1,700 tons. This figure is similar to that recorded for the same time in 1966, when the all-time production record was established. Reports to the Fishery-Oceanography Program Staff indicate that so far this year, no large schools have been observed. (In 1966, the season began with an initial flurry of activity on very large schools of bluefin close to the Baja California coast.) Local ocean conditions remain excellent for the early appearance of bluefin in Southern California nearshore waters; all that remains is for the fish to appear in substantial numbers.

July 9, 1969

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JUNE 1969

Acknowledgements

The following organizations and stations contributed data for the June 1969 charts:

U.S. Bureau of Commercial Fisheries Biological Laboratories La Jolla, California, Honolulu, Hawaii and Seattle, Washington
U.S. Coast Guard Cutter ACUSHNET
U.S. Naval Weather Service, Fleet Numerical Weather Central, Monterey, California
Environmental Science Services Administration
U.S. Weather Bureau, San Diego, California
U.S. Coast and Geodetic Survey, Pacific Marine Center, Seattle, Washington
Hopkins Marine Station, Pacific Grove, California, J. P. Balesteri
Inter-American Geodetic Survey by David Ortega at Manzanillo, Mexico; V. E. Castillo at Tumaco, Colombia; D. Chaves at Talara, Peru; Pedro Chauca and E. Portocarrero at San Juan, Peru; Arica, Antofagasta, Caldera, Valparaiso, Talcahuano, Chile, through the courtesy of St. Hellmuth A. Sievers C. at the Instituto Hidrografico de la Armada, Valparaiso, Chile.
Kelco Company, San Diego, California
Matson Navigation Company, San Francisco; S. S. CALIFORNIAN
Pacific Missile Range, Range Operations Department, Geophysics Division Point Mugu, California
Scripps Institution of Oceanography, La Jolla, California by Margaret Robinson and Hans Klein
Scripps Institution of Oceanography Research Vessels; ALEXANDER AGASSIZ, THOMAS WASHINGTON
Van Camp Sea Food Company, Division of Ralston Purina Company, Terminal Island, California
Fishing Vessels; MARTINAC, TYPHOON

Charts

Figure 1. --Mean sea surface temperatures (° F) derived from approximately 8000 observations. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2. --Deviation of sea surface temperatures (° F) from long term charts of H. O. 225. Hatched areas are colder in 1969.

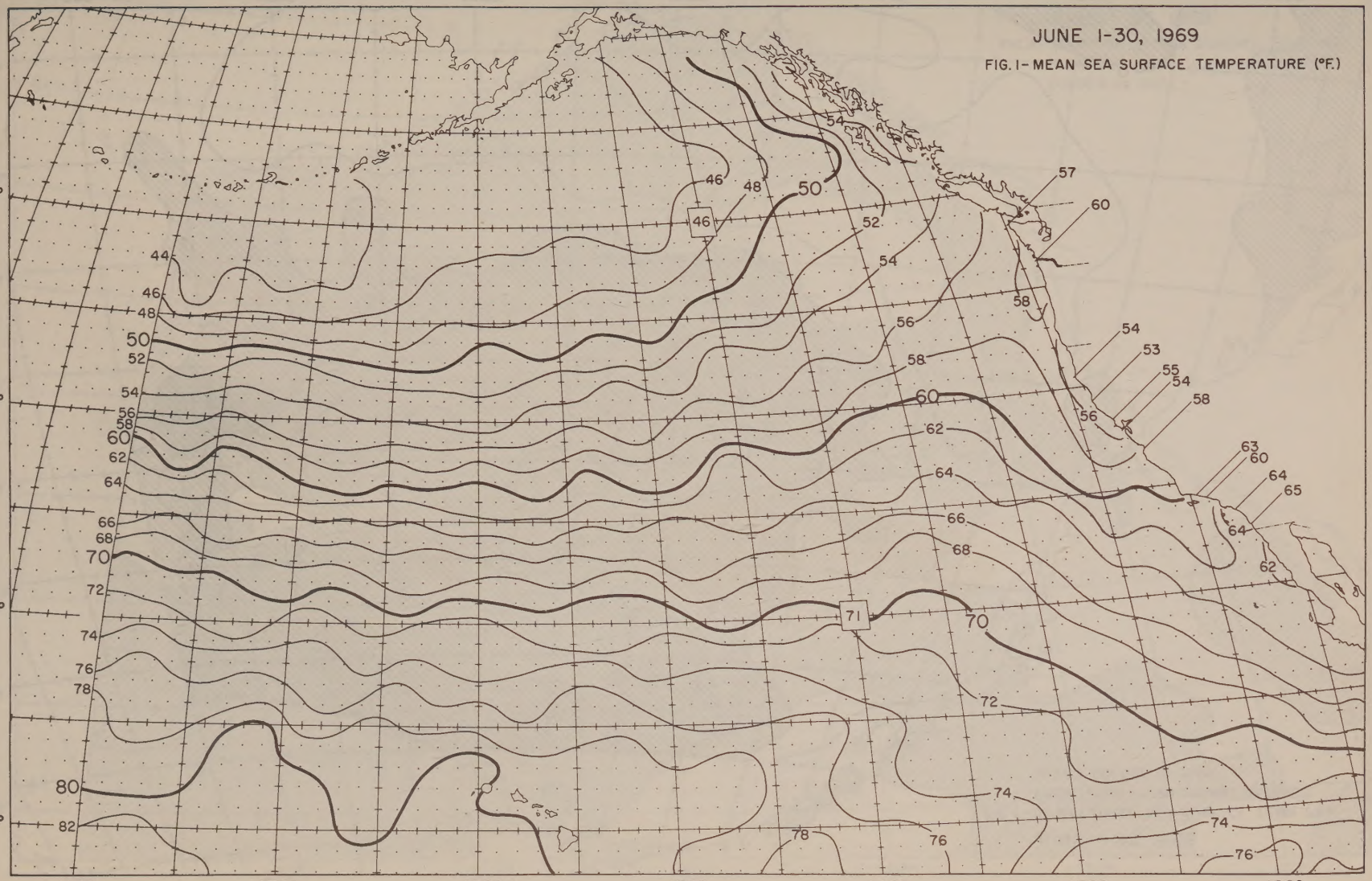
Figure 3. --Deviation of sea surface temperatures (° F) from those of June 1968. Hatched areas are colder in 1969.

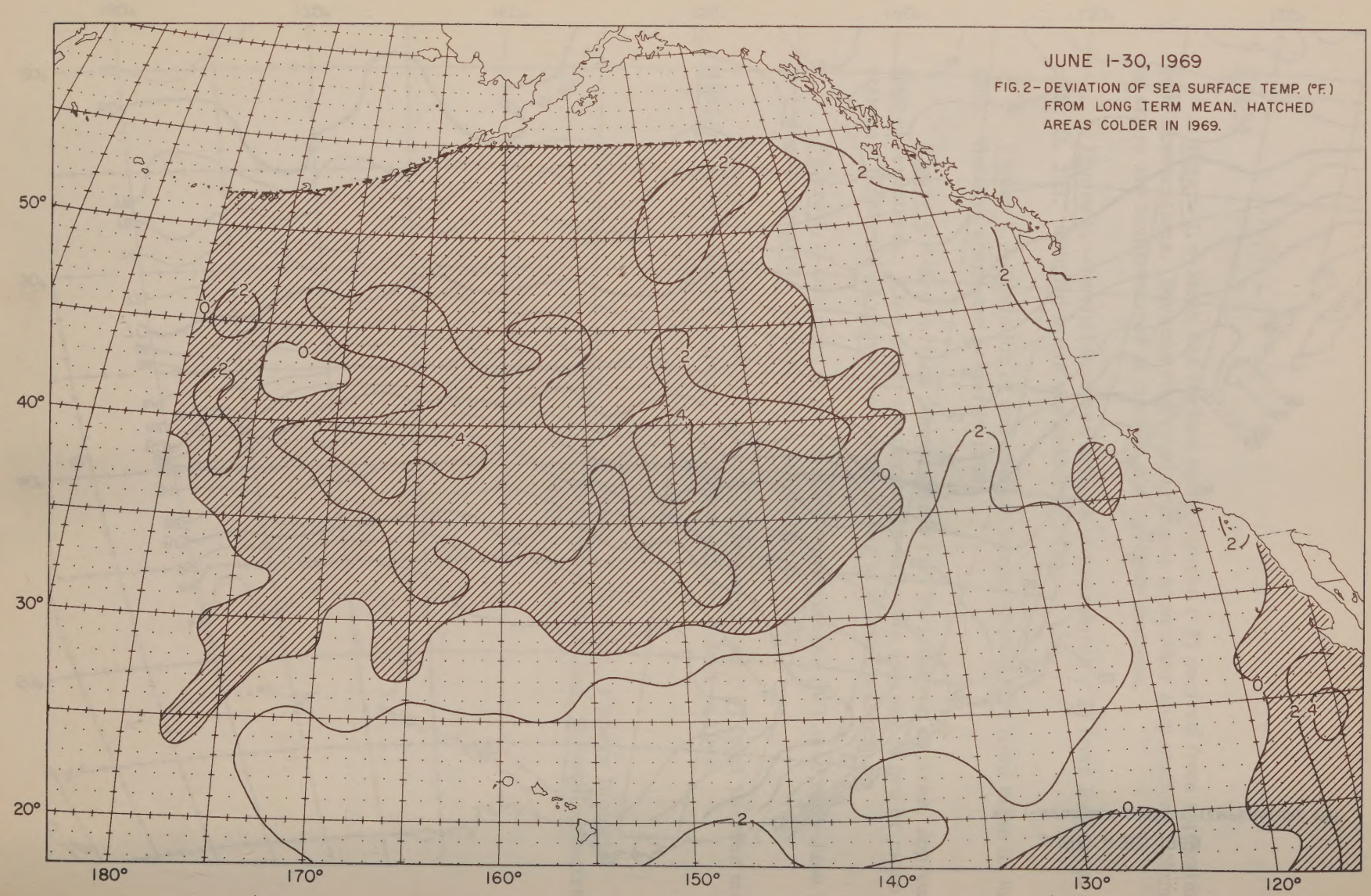
Figure 4. --Sea surface temperatures (° F) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

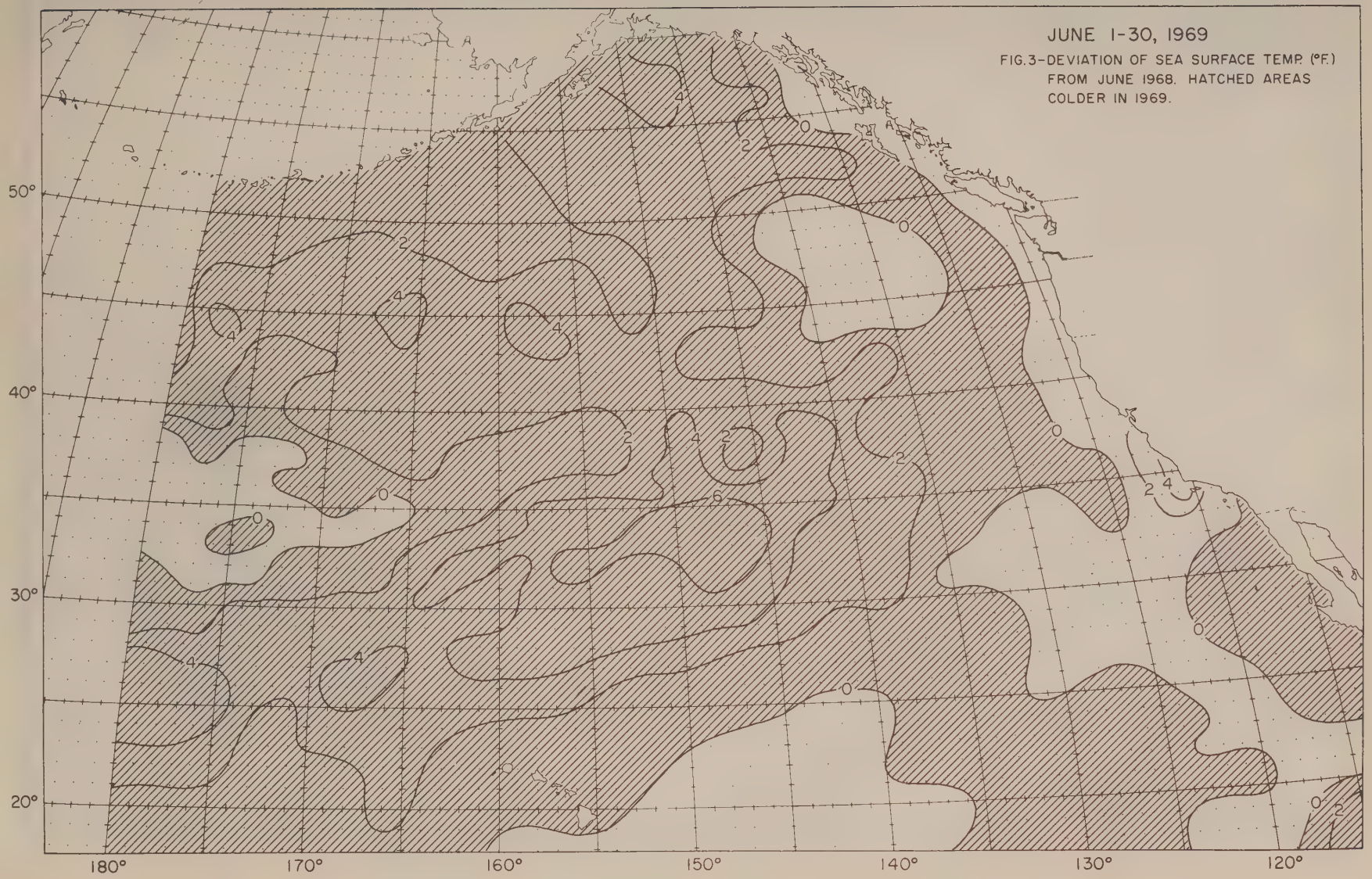
Figure 5. --Deviation of sea surface temperatures (° F) June 1969-June 1968 by 1-degree squares. Shaded areas are colder in 1969.

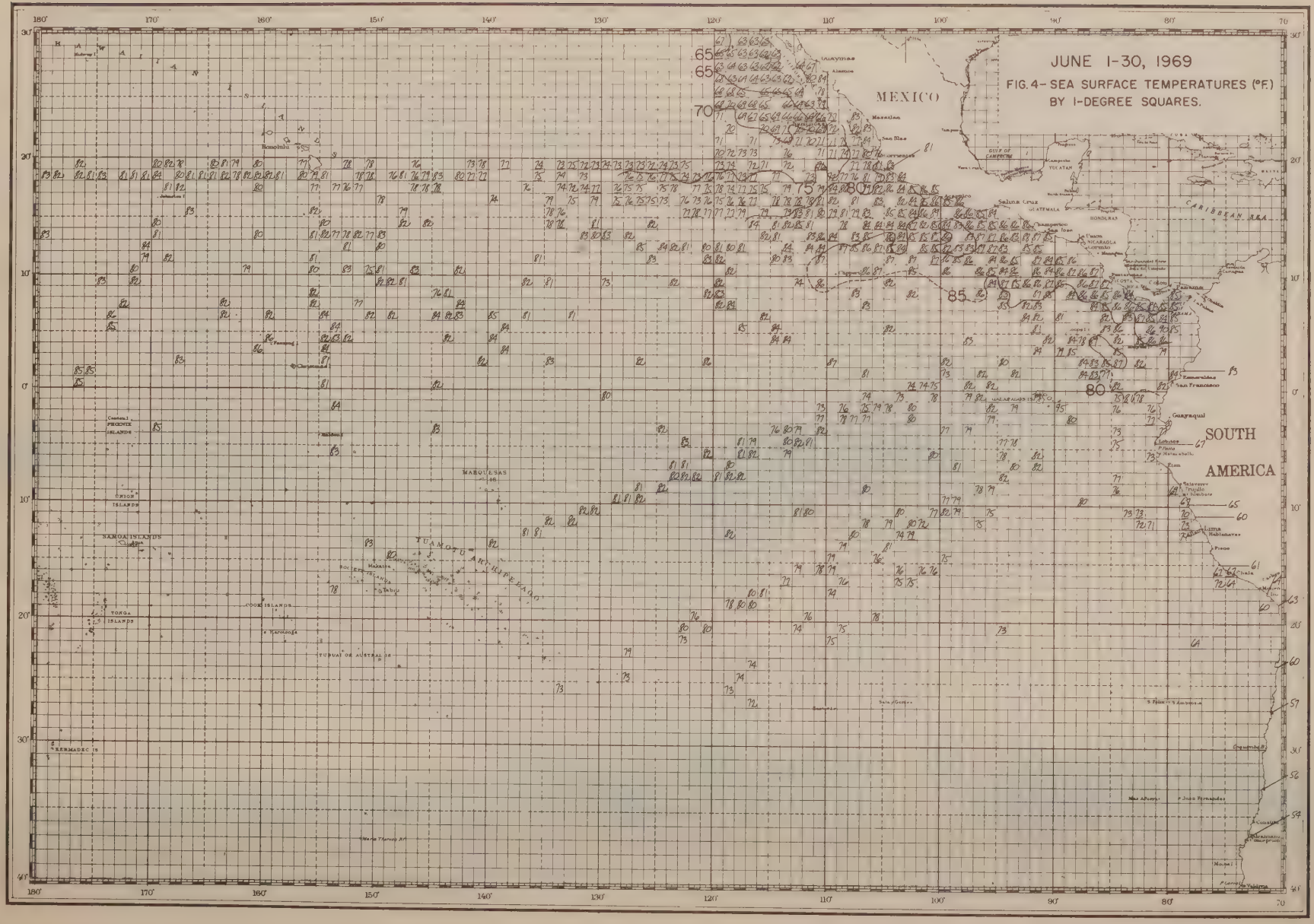
Figure 6. --Deviation of sea surface temperatures (° F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder in 1969.

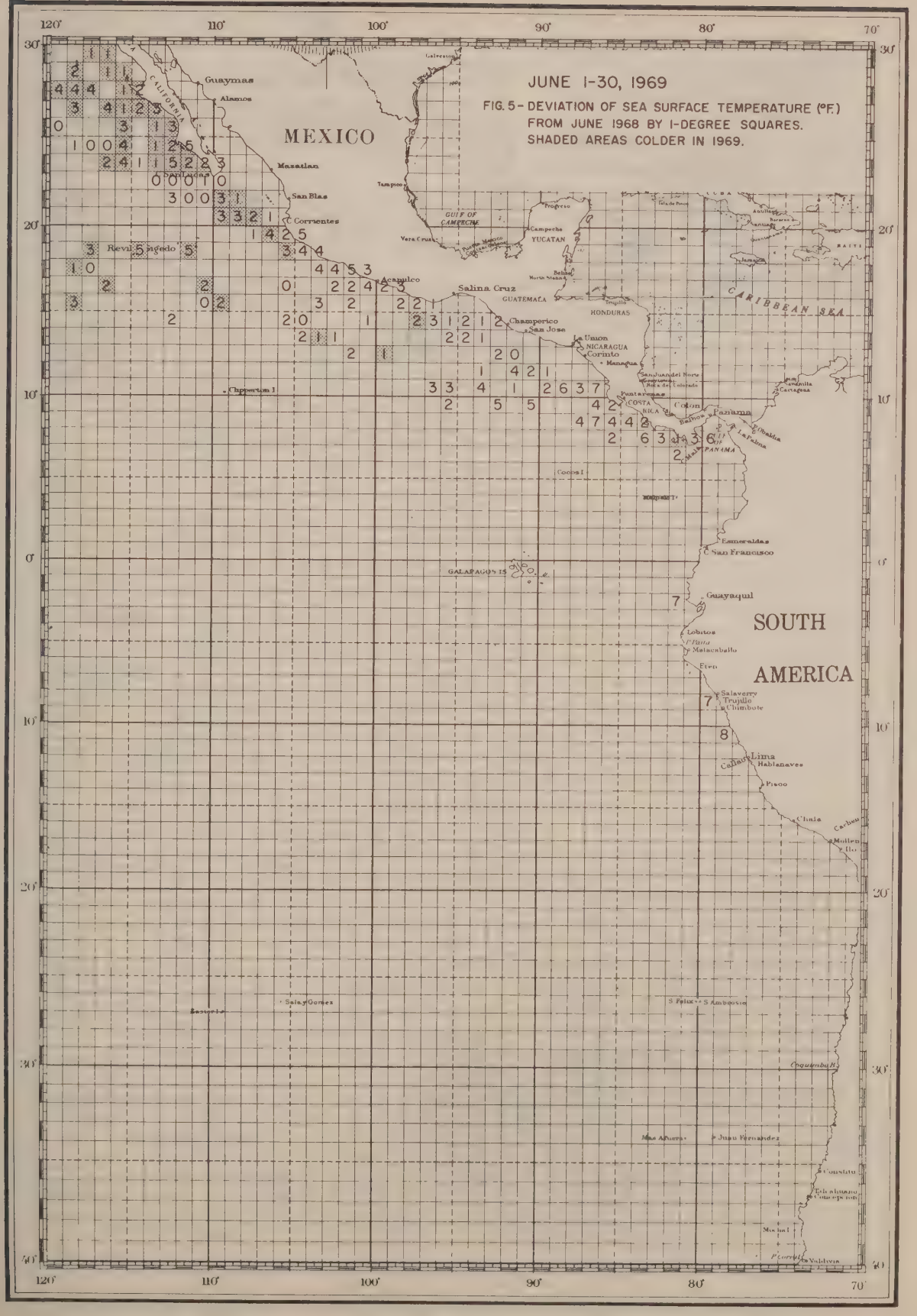
James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
July 9, 1969

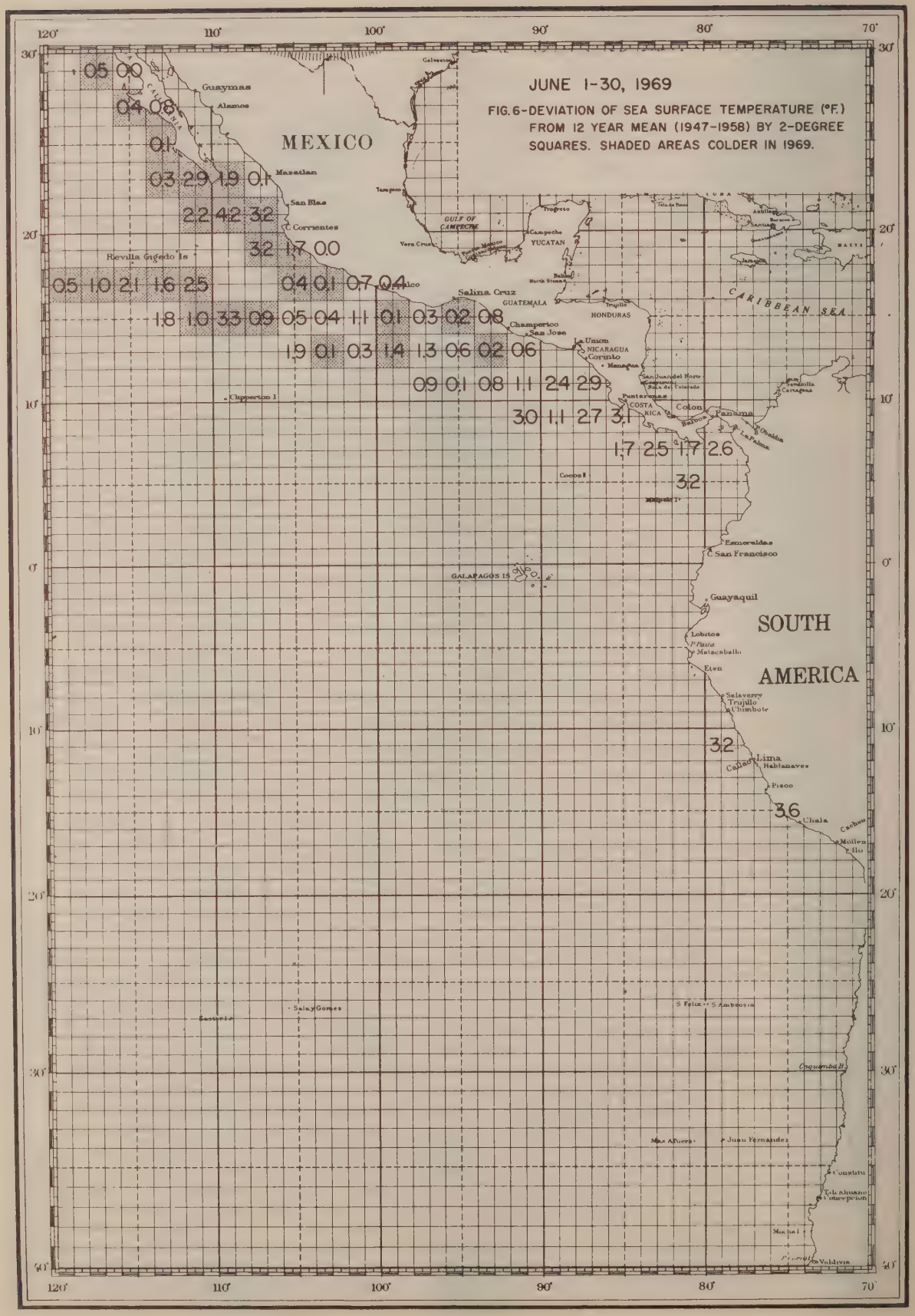

JUNE 1-30, 1969
FIG. 1- MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
46
71

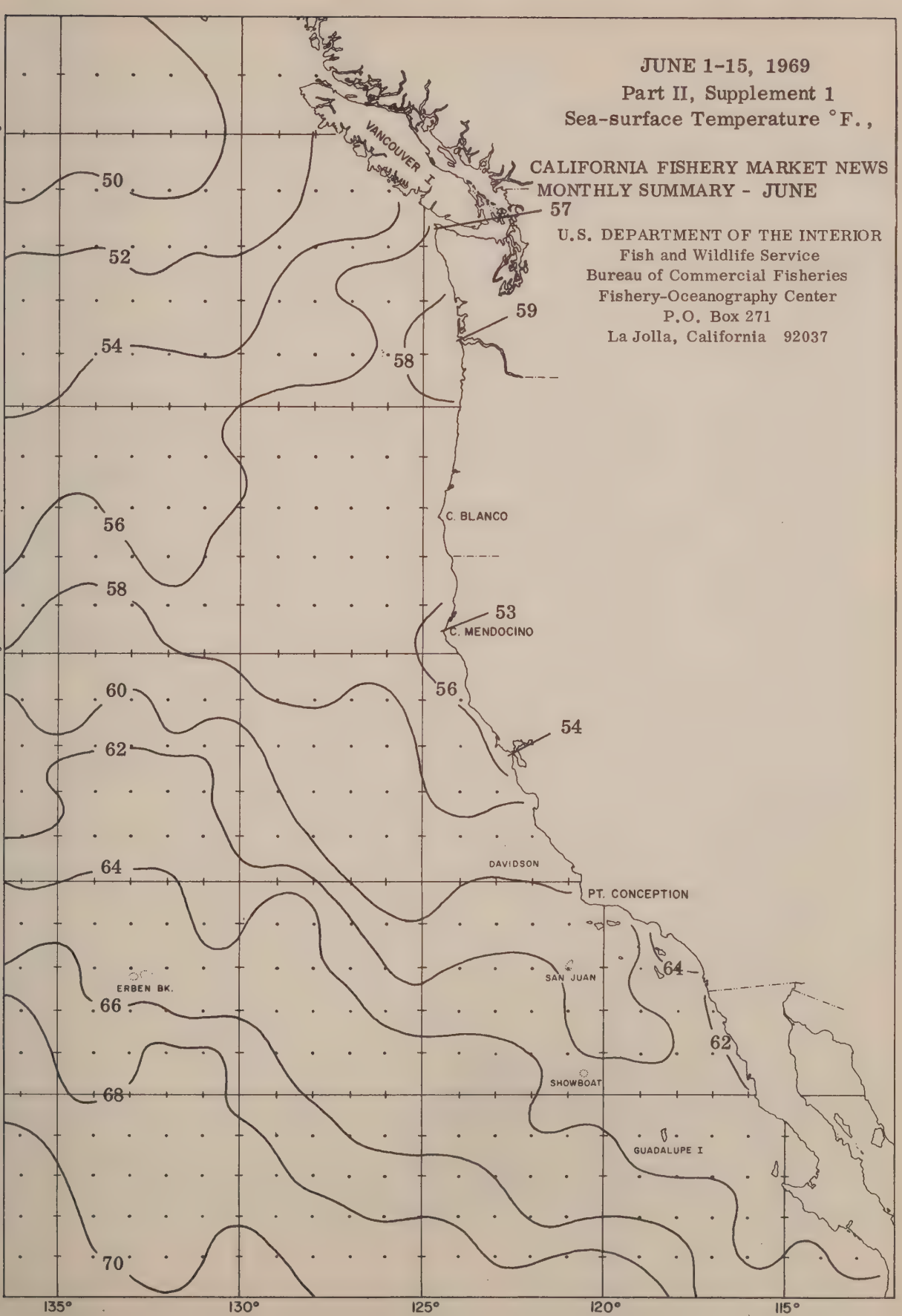

JUNE 1-30, 1969
FIG. 2 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

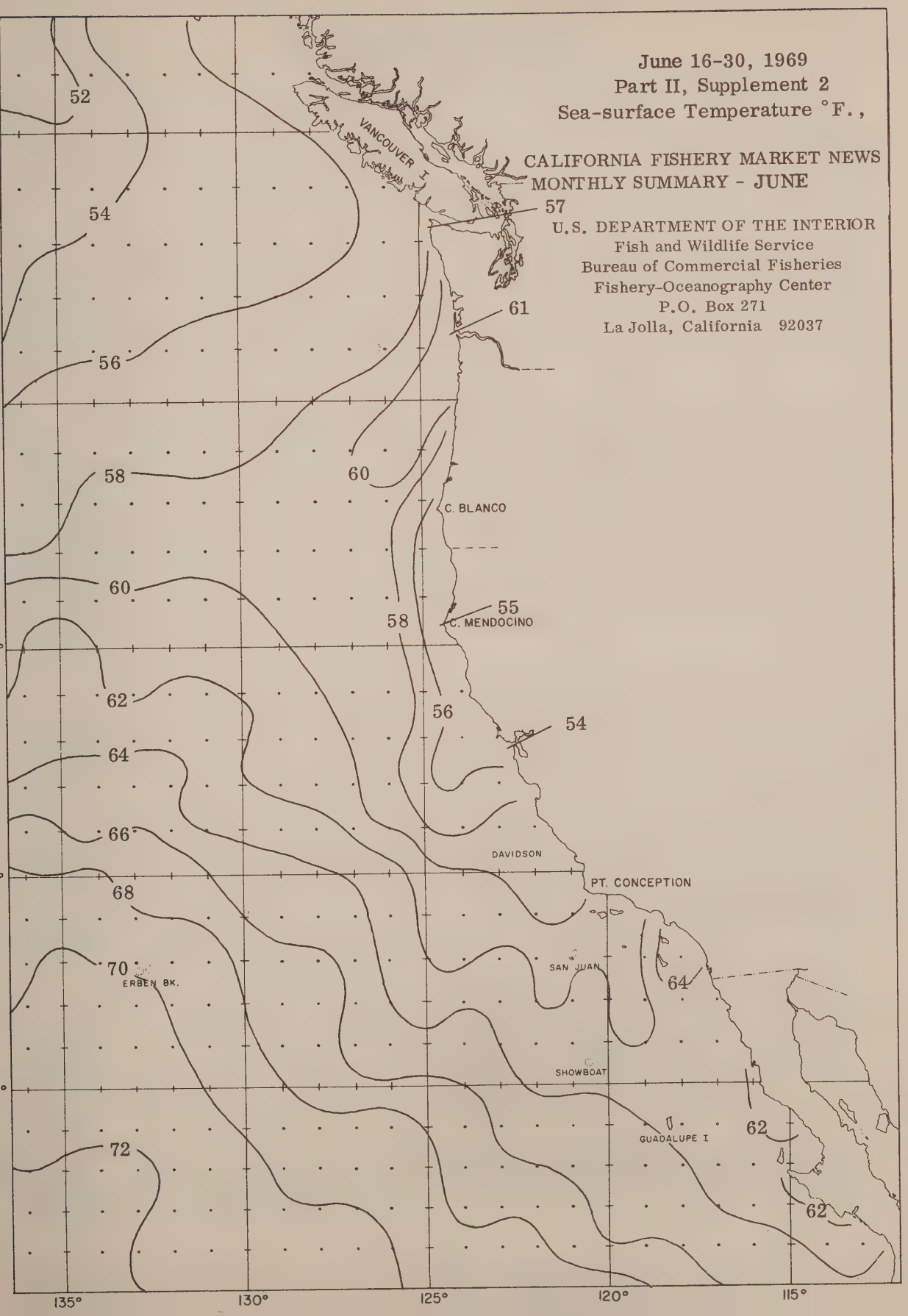

JUNE 1-30, 1969
FIG. 3-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JUNE 1968. HATCHED AREAS COLDER IN 1969.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JUNE 1-30, 1969
FIG. 4 - SEA SURFACE TEMPERATURES (°F.)
BY 1-DEGREE SQUARES.
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
HAWAIIAN ISLANDS
Honolulu
PHOENIX ISLANDS
UNION ISLANDS
SAMOA ISLANDS
TONGA ISLANDS
COOK ISLANDS
MARQUESAS
TUAMOTU ARCHIPELAGO
TUBUAI OR AUSTRAL IS.
BERMADEC IS.
Guayaquil
Lima
Callao
San Francisco
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
NICARAGUA
Manzanillo
Mazatlan
San Blas
Tampico
Veracruz
Progreso
YUCATAN
GULF OF CAMPECHE
Juan Fernandez
Mas Afuera


JUNE 1-30, 1969
FIG. 5 - DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM JUNE 1968 BY 1-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Acapulco
Salina Cruz
Champerico
La Union
Corinto
Managua
Puntarenas
Colon
Panama
Esmeraldas
San Francisco
Guayaquil
Lobitos
Talara
Malabrillo
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Arequipa
Iquique
Antofagasta
Valdivia
Coquimbo
Juan Fernandez
Sala y Gomez
S. Felix
S. Ambrosio
Cocos I.
Chapperton I.
Revillagigedo
Tampico
Vera Cruz
Progreso
Campeche
YUCATAN
Belize
Honduras
Guatemala
Nicaragua
Costa Rica
Panama
Cuba
Haiti
Jamaica
Curacao
Aruba
Maracaibo
Barranquilla
Cartagena
Rio Hacha
Galveston
Tela de Pesca
Nuevo Laredo
Abuelitas
Tuxpan
Veracruz
Coatzacoalcos
Frontera
Villahermosa
Puerto Mexico
Puerto Mexico
Tehuantepec
Isla de Pinos
Kingston
Port au Prince
Santiago
Barranquilla
Cartagena
Rio Hacha
Maracaibo
Aruba
Curacao
Nuevo Laredo
Abuelitas
Tuxpan
Veracruz
Coatzacoalcos
Frontera
Villahermosa
Tehuantepec
Isla de Pinos
Kingston
Port au Prince
Santiago
Mas Afuera
Mocha I.
Valdivia
Corral
Talcahuano
Concepcion
Constitucion
Cachou
Mollendo
Ilo
Arica
Iquique
Antofagasta
Coquimbo
Juan Fernandez
Mas Afuera
Mocha I.
Valdivia
Corral
Talcahuano
Concepcion
Constitucion
Cachou
Mollendo
Ilo
Arica
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
30°
20°
10°
0°


JUNE 1-30, 1969
FIG. 6-DEVIATION OF SEA SURFACE TEMPERATURE (°F.) FROM 12 YEAR MEAN (1947-1958) BY 2-DEGREE SQUARES. SHADED AREAS COLDER IN 1969.
MEXICO
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
CARIBBEAN SEA
GULF OF CAMPECHE
YUCATAN
SOUTH AMERICA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Salina Cruz
Champerico
Sea Jose
La Union
Corinto
Managua
Punta Arenas
Colon
Panama
Cocos I
Esmeraldas
San Francisco
Guayaquil
Lobitos
Paita
Eten
Salaverry
Trujillo
Chimbote
Callao
Lima
Pisco
Chala
Mollendo
Arica
Iquique
Coquimbo
Juan Fernandez
Valdivia
Progreso
Campeche
Tampico
Veracruz
Galveston
Cuba
Jamaica
Haiti
Trujillo
Cartagena
Chiriqui I
Rivilla Gigedo Is
0.5 0.0
0.4 0.8
0.1
0.3 2.9 1.9 0.1
2.2 4.2 3.2
3.2 1.7 0.0
0.5 1.0 2.1 1.6 2.5
0.4 0.1 0.7 0.4
1.8 1.0 3.3 0.9 0.5 0.4 1.1 0.1 0.3 0.2 0.8
1.9 0.1 0.3 1.4 1.3 0.6 0.2 0.6
0.9 0.1 0.8 1.1 2.4 2.9
3.0 1.1 2.7 3.1
1.7 2.5 1.7 2.6
3.2
3.2
3.6
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
40°


JUNE 1-15, 1969
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JUNE
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
VANCOUVER I.
50
52
54
57
59
58
C. BLANCO
56
58
53
C. MENDOCINO
60
62
56
54
64
DAVIDSON
PT. CONCEPTION
ERBEN BK.
66
68
70
SAN JUAN
64
62
SHOWBOAT
GUADALUPE I
135°
130°
125°
120°
115°


June 16-30, 1969
Part II, Supplement 2
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JUNE
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
52
54
56
57
61
58
60
C. BLANCO
60
58
55
C. MENDOCINO
62
56
54
64
66
DAVIDSON
68
PT. CONCEPTION
70
ERBEN BK.
SAN JUAN
64
SHOWBOAT
62
GUADALUPE I
72
62
VANCOUVER I.
135°
130°
125°
120°
115°

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 69-2

ALBACORE ACTION TO START SOON

The Bureau of Commercial Fisheries R/V DAVID STARR JORDAN is presently underway on the southern portion of California Cooperative Oceanic Fishery Investigations--Marine Life Research anchovy-sardine survey grid off lower Baja California. Since June 9, JORDAN has been trolling for albacore between stations during daylight hours, and has traversed early-season opening spots such as the Dumping Grounds and the Showboat Bank area southwest of San Diego about 100-150 miles. No albacore have been taken by JORDAN to date.

We expect albacore tuna to appear early in California offshore waters again this year. Strong surface current flow in the eastern North Pacific suggests that migrating albacore may receive an additional eastward "push", enabling them to appear in numbers on the Pacific coast feeding grounds during the latter half of June. Above-normal warming has begun in the Erben Bank region about 900 miles west of San Diego, aiding the rapid northeastward advance of the 60° isotherm. Although we expect California landings to improve considerably this year, Oregon-Washington should lead the production race with 25-35 million pounds of the anticipated 40-56 million pound total. California's landings should reach 15-21 million pounds, depending partly upon how soon a dockside fish price settlement is reached, and partly upon the continuation of present climatological events during midsummer.

The Pacific coast has experienced unusual spring weather: the northwesterly winds associated with the eastern side of the North Pacific High cell have been weaker than normal and the usual intensification of upwelling in May has not occurred. Consequently, inshore temperatures are higher than normal, and the extent of the "green water" is expected to be much less than usual. A persistent cold-core eddy in the upper atmosphere has virtually terminated normal northwesterly wind flow off central and southern California in the past 2 weeks, and sea temperatures have begun to rise sharply in the absence of the usual combination of evaporative cooling, turbulent mixing and upwelling. According to the Extended Forecast Division of the Weather Bureau, this unusual weather pattern is expected to continue through mid-July. If the present trend continues unabated, the California albacore season should experience an early start. However to maintain good catches, boats will have to move offshore or to northern waters as nearshore surface temperatures continue to climb.

Radio Station WWD, licensed to the Bureau of Commercial Fisheries and located on the campus of the Scripps Institution of Oceanography, University of California at San Diego, will resume its broadcasts of albacore fishery information. Double sideband (AM) voice broadcasts will be transmitted from WWD twice daily during weekdays from June 23-October 31 on 4415.8 kcs and on single sideband (SSB) on 8805.6 and 12,403.5 kcs at 0500 PST (0600 PDST) and 1945 PST (2045 PDST).

Interested fishermen are invited to refer to the May issue of the California Fishery Market News Monthly Summary, Part II--Fishing Information for complete details of the 1969 temperate tuna forecast and for further information concerning WWD operations.

June 16, 1969

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 69-3

1969 ALBACORE SEASON OPENING DELAYED

The 1969 albacore tuna fishing season has not yet begun. The delay is partly due to the fishermen-processors e negotiations, which are still not officially settled, and which have prevented any large-scale scouting activities by commercial fishing fleet, and also partly due to the delayed appearance of the fish in Pacific coast nearshore waters.

The Fishery Forecasting Project Staff has verified two reports of early albacore catches: the fishing vessel 'HOON has taken 37 fish commencing on June 20 and intermittently thereafter up to 0730 on June 30 in a region situated een longitudes 129° W. and 135° W. and latitudes 41° N. and 37° N. TYPHOON is operating on a pre-season scouting under a joint cooperative arrangement between the Fishery-Oceanography Center and Oregon State University. 'HOON's catches were taken in an area where sea surface temperatures ranged from 60-64° F. F/V TYPHOON's ndable bathythermograph reports by radio indicate an upper warm layer ranging from 40 feet deep in the northern of this region to over 100 feet deep in the southern part. Although considerable nearshore scouting (mostly by sport- ers) has taken place during the past week off southern California, only one 24-pound albacore was taken on June 29 by partyboat HM-85 in 61° F. water approximately 135 miles WSW of San Diego.

The unusual weather mentioned in our Bulletin No. 69-2 continued with little change until the June 24-26 interval. ing this time, the Eastern North Pacific High began to build northward and to intensify, bringing moderate to strong vailing northwesterly winds to the entire U.S. west coast. Rain and overcast conditions, combined with turbulent wind ing, have caused sea surface temperatures to drop as much as 1.5° F. in F/V TYPHOON's operating area. This ing has served to retard the normally-rapid advance of the 60° water northeastward. According to the Extended Fore- t Division of the Weather Bureau, the forecast retrogression of the surface high pressure ridge, accompanied by a per-than-normal upper air trough just off the U.S. west coast, will increase northwest wind flow during the next month. s, the warm sea temperature ridge which usually develops along an axis from 40° N., 130° W. to Cape Blanco during July 1-15 interval may not proceed as rapidly as last year, and consequently, albacore may not enter the Oregon coastal e until the second week of July.

California fishermen and processors may welcome a slow Oregon start, for more of the incoming albacore may l southward along the optimum temperature band into the southern-central California fishery areas. San Juan Sea- unt remains a good spot to find early fish, and with little major upwelling evident so far this season, boats operating of Morro Bay and Monterey Bay should have easier access to the fish, wind conditions permitting.

The outlook for the next 2 weeks suggests that the Oregon State University R/V CAYUSE and the Fish Commission Oregon R/V SUNRISE may not locate significant concentrations of albacore, for the summer thermal cycle in this district y be retarded slightly in comparison to last year. In California, however, with light upwelling only now occurring sub- quent to the recent northwest winds, albacore should be found relatively close to shore by the end of the first week of July

e 30, 1969

Staff, Fishery-Oceanography Program
Glenn A. Flittner, Leader